DOCUMENT RESUME

ED 441 775 SP 039 231

| | |
|---|---|
| AUTHOR | Ackley, Blaine C.; Campbell, Travis C. |
| TITLE | Judicious Discipline: A Case Study of a Student Teacher. |
| PUB DATE | 2000-04-00 |
| NOTE | 18p.; Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 24-28, 2000). |
| PUB TYPE | Reports - Research (143) -- Speeches/Meeting Papers (150) |
| EDRS PRICE | MF01/PC01 Plus Postage. |
| DESCRIPTORS | Action Research; *Classroom Techniques; *Democracy; Democratic Values; *Discipline; High School Students; High Schools; Higher Education; Participative Decision Making; Preservice Teacher Education; Secondary Education; Student Behavior; Student Participation; *Student Teachers; Teacher Student Relationship |
| IDENTIFIERS | *Judicious Discipline; University of Portland OR |

ABSTRACT

This study examined the effects of using the Judicious Discipline (JD) program in one student teacher's classroom. The student teacher administered anonymous student surveys on discipline to his high school social studies class. He then introduced and discussed freedom, justice, and equality with his students and examined the concepts of rights and responsibilities in relation to the U.S. Constitution and Bill of Rights. Students learned about the delicate balance between individual rights and the needs of the community. They were introduced to the concept of compelling state interests, which involves placing limits on students' individual rights. Students were presented with school discipline cases and asked to brainstorm consequences that would result from breaking certain rules. This culminated with the class creating its own discipline rules, integrating the previously learned Constitutional concepts and language. The student teacher then readministered the survey. Comparison of data from the two surveys indicated that for student teachers who are committed, comfortable, and confident with the concept, JD can enable students to become more comfortable in the classroom and accomplish greater academic gains than they might ordinarily make. Student perceptions moved from less to more autonomous. The survey instrument is appended. (Contains 26 references.) (SM)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 441 775

# Judicious Discipline: A Case Study of a Student Teacher

By

Blaine C. Ackley, Ed.D.
University of Portland
Portland, Oregon

&

Travis C. Campbell, MAT
Clover Park High School
Tacoma, Washington

A Paper Presentation at
The American Educational Research Association Annual Meeting
New Orleans, Louisiana

April, 2000

© 2000
No portion of this document may be reprinted without the express written permission of the authors

SP039231

BEST COPY AVAILABLE

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

B.C. Ackley

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

# Judicious Discipline: A Case Study of a Student Teacher

**by Blaine C. Ackley, Ed.D., University of Portland &**
**Travis C. Campbell, MAT, Clover Park High School, Lakewood, WA**

**Introduction:**
This was an exploratory study to examine the effects of using the Judicious Discipline (JD) program in one University of Portland student teacher's classroom. We hope results of this study will help to contribute toward a research base about effective practices for JD among student teachers.

**Background:**
For many pre-kindergarten through grade 12 teachers, most studies of effective first year teachers have found that classroom management skills are of primary importance in determining their success (Brophy & Evertson, 1976). Effective classroom management practices suggest that teachers who respond to problems as they occur and are proactive in preventing problems from happening in the first place are more successful (Emmer, Evertson, Clement & Worsham, 1997). A key variable in the prevention of any classroom management problem is the establishment of positive student-teacher and student-peer relationships in the classroom (Jones & Jones, 1998).

The most successful classroom management practices are those that go beyond strict obedience to include student self-understanding and self-control (McCaslin & Good, 1992). Yet, many classroom management and discipline strategies and methods currently used in American schools are based on behavior modification philosophies (Hill, 1990). In such cases, students may feel powerless to control their situation in the classroom. Such a powerless attitude may make students at-risk for school failure. As Sarason (1990) suggests,

> ...the sense of powerlessness [that students must feel] frequently breeds reduced interest and motivation, at best a kind of passionless conformity and at worst a rejection of learning. When one has no stake in the way things are, when one's need or opinions are provided no forum, when one sees oneself as the object of unilateral actions, it takes no particular wisdom to suggest that one would rather be elsewhere. (p. 83)

The United States lives under a democratic rule of law and some people believe our children should have the opportunity to practice and use democratic principles in our schools. Most educators agree that our youth need to learn to be responsible citizens, which is, additionally, a goal of national education standards (NCSS, 1994). Still, researchers have found that most American schools do not provide students with opportunities to engage in activities that

allow them to practice and internalize behaviors consistent with citizenship and civility (Goodlad, 1984; Sizer, 1984; Boyer, 1983; Lightfoot, 1983; Lipsitz, 1984). There are a small number of classroom management programs that encourage students to become responsible for their own actions (Fay & Funk, 1995; Gossen, 1997; Nelsen, 1996; Curwin & Mendler, 1988). But, there are few models of classroom management that specifically encourage students to feel a "proprietary interest in school and classroom rules" (Gathercoal, 1997) and that encourage students to "construct their own moral meaning" (Kohn, 1996). In fact, there is only one classroom management program that is based on the Constitution of the United States: Judicious Discipline (Gathercoal, 1997).

Because Judicious Discipline (JD) is a relatively new program there has been little research (McEwan, Gathercoal & Nimmo, 1999) accomplished to support the efficacy of the program. For that reason and with the encouragement of the program's originator, Dr. Forrest Gathercoal, we examined how effective JD was for one University of Portland student teacher who was enrolled in the Master of Arts in Teaching (MAT) program during the 1998-99 school year. The subject, Mr. Campbell, is the co-author of this study.

One of the biggest obstacles to overcome for most student and first year teachers is the implementation of an effective classroom management plan. Because JD can have a positive effect on the relationship between student-teacher and student peer relations (McEwan, Gathercoal & Nimmo, 1999), there is evidence to suggest that JD might be especially effective for student teachers and many teachers new to the profession.

**Method:**

After the subject of this study, Mr. Campbell, secured permission from his principal and cooperating teacher and once he was engaged in full-time student teaching (January, 1999), he asked a proctor to administer the anonymous student surveys to one of the five classes he selected as appropriate for this study (see Appendix A). At the beginning of the semester, each of the five classes received lessons and activities that helped put JD into context in the classroom environment. The class chosen was 7$^{th}$ period, mostly because it best represented the academic and social diversity of the school. Because the 7$^{th}$ period class is his last class of the day, Mr. Campbell was apprehensive because students seemed to get unruly near the end of school day under the Cooperating Teacher's (CT) existing management plan. Throughout his student teaching tenure, Mr. Campbell implemented JD in this classroom.

Mr. Campbell began by introducing and discussing "freedom, justice, and equality," and asked students how these democratic principles could be applied to everyday life. Then, he introduced the concepts of "rights and responsibilities" in relation to the U.S. Constitution and Bill of Rights. Students were made acutely aware of the delicate balance between individual rights and

the needs of the community. Additionally, students were introduced to the concept of "compelling state interests," or limits placed on students' individual rights (Gathercoal, 1997; Landau & Gathercoal, 2000). Students were presented with school discipline cases and asked to brainstorm consequences that would result from breaking certain rules. This activity culminated with the class creating its own discipline rules, integrating the previously learned Constitutional concepts and language.

Near the end of Mr. Campbell's student teaching experience, he again had a proctor administer the anonymous student survey to this class. We, then, quantitatively compared and contrasted the student responses from this class in the pre-treatment and post-treatment instruments.

In addition, Dr. Ackley spoke to Mr. Campbell on several occasions and he took notes from those conversations. Dr. Ackley also spoke to Mr. Campbell's university supervisor about her observations of the class in question. Dr. Ackley and Mr. Campbell, then, analyzed and collated this data for themes and patterns (Miles & Huberman, 1994).

**Data Sources:**

**Mr. Campbell's 7th Period Subjects: General Description of the Population**

The subjects were enrolled in a sophomore-level social studies ("Global Studies") class in a Portland Public high school. The school receives a diverse student population from the surrounding middle schools. The neighborhoods are typically low socioeconomic and working class. The crime rate in this area is above average for the Portland-Metropolitan region. Issues the school currently works to improve include minor vandalism to school property, drug/substance abuse, chronic low attendance, and gang violence.

The class represents the diverse social, ethnic, racial, and academic backgrounds that characterize the school and surrounding community. It is mostly composed of sophomores (10), but has three freshmen, two juniors, and a senior. At the beginning of Mr. Campbell's full-time student teaching work, the students just transitioned from 1st to 2nd semester where they received instruction from Mr. Campbell's CT. The CT, by his own admission, uses an authoritarian classroom management plan and employs traditional methods in instruction and assessment (mostly direct instruction and multiple-choice tests).

The physical classroom was originally configured in rows, but Mr. Campbell rearranged the furniture into a large U-shape meant to help encourage discussion among students during class.

**Class Data:**

The class data from the pre-treatment and post-treatment survey indicate general movement of student perception from less autonomous to more autonomous, and perceptions of positively increased teacher-student and student peer relationships. (For the guide to scoring see Appendix B)

Table 1 – Results of Pre-Treatment Instrument

| | S1 | S2 | S3 | S4 |
|---|---|---|---|---|
| Questions 1-2 | 15 | 0 | 0 | 0 |
| Questions 3-4 | 7 | 8 | 0 | 0 |
| Questions 5-6 | 2 | 2 | 1 | 10 |
| Questions 7-8 | 7 | 3 | 1 | 4 |
| **Total (total=60)** | **31** | **13** | **2** | **14** |
| Percent of total | 51.6% | 21.6% | 3.3% | 23.3% |

Table 2 – Results of Post-Treatment Instrument

| | S1 | S2 | S3 | S4 |
|---|---|---|---|---|
| Questions 1-2 | 10 | 1 | 4 | 0 |
| Questions 3-4 | 1 | 1 | 7 | 6 |
| Questions 5-6 | 0 | 1 | 5 | 9 |
| Questions 7-8 | 1 | 2 | 2 | 10 |
| **Total (total=60)** | **12** | **5** | **18** | **25** |
| Percent of total | 20% | 8.3% | 30% | 41.6% |

Student behavior for each of the above stages is described by McEwan, Gathercoal & Nimmo (1999) in this manner:

> "In stage S1, the main issue is dependence. Students are generally dependent and submissive, and do what the teacher says. . . In stage S2, the main issue is rebellion. The students test, challenge and try out the teacher. . . In stage S3, the main issue is cohesion. Students are friendly and trusting of each other and the teacher. . . In stage four the main issue is autonomy. Individuals are self-directed, able to seek and give support but function well without it. " (pgs. 11-12)

We noted the marked decrease in the dependence and rebellion stages and the corresponding increases in the cohesion and autonomous stages between the first and second time that the students answered the survey instrument.

The survey instrument was originally developed by the research branch of the South Australian Department of Education (1980). (As found in Appendices A & B)

**Interview Data:**

**University Supervisor**

The supervisor's observations support the survey data. According to his supervisor, Mr. Campbell's use of JD in this class was "amazingly successful." "He really turned it around (referring to the classroom atmosphere) and they (the students) responded very positively," she explained. In the supervisor's view, the CT had already "written some students off" while Travis felt everyone was "salvageable." The supervisor discovered that most students in Mr. Campbell's class were "actively engaged and everyone achieved to some extent." In her view, the quality of student work was "amazing."

However, this supervisor did not think that JD would be an appropriate classroom management system for most student teachers unless the student teacher was as committed to the success of the program as was Mr. Campbell. In her words, "Travis really believed in something (JD). Because he was so committed, he made it work." This supervisor felt that the student teacher must have the confidence to change the system in order to make it (JD) work in the classroom.

**The Subject - Mr. Campbell:**

The implementation of the JD model was a major shift from the authoritarian manner in which the CT had run the classroom. The CT had a posted list of class rules—the final rule on this list was "I am always right."

The first few days under the "new regime" were unsettling for students. They were "unsure" about what the new system meant for them. For example, they were quite apprehensive about how appropriate it was to eat, chew gum, or wear hats in class.

Mr. Campbell explained "my epiphany was realizing that JD had created a underpinning framework so students could behave in a socially approved manner." He noted that, "Daily social intercourse became an accepted part of classroom life."

Mr. Campbell also noted that he had to develop his own appropriate materials to use with the class. He believed that a teacher with students who were accustomed to a reward and punishment system would find "JD difficult to swallow." He thinks that the classroom context is an important factor in the success of JD in any classroom.

From his own perspective, Mr. Campbell felt that his use of JD was unique "because I had an academic background in history, and so JD fit into my

curriculum and personal agenda." Additionally, with his academic background in clinical psychology, Mr. Campbell believed "that creating a comfortable and safe climate for learning" was important in enabling students to establish "positive and collaborative peer relationships." He believed that this, in turn, "made for a climate where students felt less intimidated about sharing their ideas and that it promoted learning."

**Conclusions:**

**Mr. Campbell's Action Research Conclusions**

For many students in Mr. Campbell's classroom, JD seemed to make an important difference. He described some positive changes that he observed in student behavior during his student teaching experience. Mr. Campbell admits, however, that his observations and comments are confined only to his classroom experience, and that references made to his results only indicate a perceived consistency between his observations and the students' survey responses.

Understanding the process to be purely qualitative, Mr. Campbell admits that there is no way to statistically determine the degree to which the variable (JD) affected his students' behavior and their survey results without the use of inferential statistics. He presented the possibility that there exists any number of variables that could have affected the study's outcomes. Furthermore, with regard to the pre- and post-treatment results, although the actual scores recorded moved in the same direction as other studies examining the effectiveness of JD, it is impossible to determine if Mr. Campbell's data represents a statistical *significant difference*. Neither previous studies nor Mr. Campbell's conducted statistical tests on the results of the surveys. However, the quantitative results of this study triangulated with Mr. Campbell's observations, the university supervisor's observations, and Dr. Ackley's interviews do, however, clearly support the case that JD has had a positive impact on the class in question.

**This Study's Conclusions**

It is clear that JD is not a magic pill for all student teachers. This study suggests through qualitative research methods that for those student teachers who are committed, comfortable, and confident with the concept, JD can enable students to become more comfortable in the classroom and accomplish greater academic gains than they might ordinarily make.

Consistent themes of teacher confidence and personal and classroom fit emerge from the data. This is especially true in idiosyncratic school situations without the benefit of a school wide implementation of a JD management plan. When a student teacher finds a philosophical match with JD in a situation in which the cooperating teacher has an open attitude toward experimentation, JD is quite an appropriate classroom management system for student teachers to use. It is clear that those skeptical university supervisors who claim that JD is

inappropriate for use by student teachers because it is such an involved and complicated system to implement, must rethink their objections. We suggest that university supervisors should take each student teacher's request to use JD in the student teaching placement on a case by case basis using the guidelines and ideas we have presented above.

One final observation, another student teacher who originally planned to be a part of this study but was unable to do so because he was not fully able to implement JD in his student teaching situation, has recently contacted the researchers. He is presently teaching math and science classes at a Portland middle school, and as a proponent of JD, he is currently using it in his classes with great success. In Dr. Ackley's conversations with this former student, he echoes much of what Mr. Campbell said with the exception of those references to the social studies subject matter.

**Suggestions for Future Research:**

As previously mentioned, one aspect of this study that was not addressed is if the change in student perception and behavior was *directly related* to the use of JD/constitutional language in the classroom or if another variable caused said changes. For instance, with regard to previous studies, is there a possibility that school and district-wide cooperation and collaboration between students, teachers, parents, helped more than the student management approach (JD) itself (McEwan, Gathercoal & Nimmo, 1999)? Could another student-centered management program, replacing JD, have earned the results from the attitudinal survey as JD did? To what degree is the shift in student responses from dependent and rebellious to cohesive and autonomous caused by variables that might have naturally occurred otherwise after a student-centered teaching theory and philosophy is introduced to a class? These questions remain unanswered based on the results of Mr. Campbell's study and previous studies.

Mr. Campbell suggests one possibility is to use a different attitudinal survey that aims to reveal student insight and perception in more specific ways. For instance, students reported to him that particular aspects of the measurement instrument frustrated them. First, the instrument only gave the students two options by which to respond "true" or "false." The survey proctor indicated that some students elected to place an "X" in between the true and false boxes, and subsequently directed students to make an either/or choice. Second, it was reported that the wording of some survey questions bothered other students. One student noted that a response to (question #5) "we are all very friendly in this class" largely depended on if the student was having a good day or not. Another student wondered what the survey maker's definition of the word "upset" was in question #6. (See Appendix A)

A further critique of the instrument is that it has only two questions—dependent on each other for scoring purposes—to measure student attitude on each

particular topic, e.g., "teacher power." Measuring attitude is a complex process, and measuring it with respect to a particular topic is even more specific and complex. Does measuring student attitude in **only** two questions with respect to a particular topic open the possibility of inaccurate data collection? Indeed, some social science concepts are implicitly multidimensional and may require several more measures to indicate an overall attitude or belief (Babbie & Hallie, 1995).

The concept of *composite measures*, or using multiple indicators to generate an overall measure of a particular item may work better in collecting data on student attitude from the survey. In the case of this study's pre- and post- treatment instrument, perhaps 10 questions on each topic related to "power" and "affect" in the classroom could be asked and scored with multiple composite results to determine student attitude on a particular item. This method has the potential of decreasing the degree of error that might exist when obtaining information with just two questions as opposed to using 10 or 15, etc. Thus, it would strengthen the *reliability* of the survey measurement and enhance the quantitative quality of research with regard to JD's effectiveness.

Future research on this topic might include investigating the *direct* effect of JD on the classroom and the students, revisiting the *reliability* of the survey instrument, and conducting *statistical analysis* on future surveys to account for direct relationships between variables and the subjects' responses.

**References:**


Babbie, E. & Halley, F. (1995). Adventures in social research: Data analysis using SPSS for windows. Thousand Oaks, CA: Pine Forge Press.

Boyer, E. (1983). High school: A report on secondary education in America. New York: Harper & Row.

Brophy, J. & Everston, C. (1976). Learning from teaching: A developmental perspective. Boston: Allyn & Bacon.

Curwin, R.L. & Mendler, A.N. (1988). Discipline with dignity. Alexandria, VA : Association for Supervision & Curriculum Development.

Dewey, J. (1916). Democracy and education: An introduction to the philosophy of education. New York: The Free press.

Emmer, E.T., Evertson, C.M., Clements, B.S. & Worsham, M.E. (1997). Classroom management for secondary teachers. Boston: Allyn & Bacon.

Fay, J. & Funk, D. (1995). Teaching with love and logic: Taking control of the classroom. Golden, CO: Love and Logic Press.

Gathercoal, F. (1997). Judicious discipline (4th ed.) San Francisco: Caddo Gap Press.

Glasser, W. (1990). The quality school: Managing students without coercion. New York: Harper Row.

Goodlad, J. (1984). A place called school. New York: McGraw Hill.

Gossen, D.C. (1997). Restitution: Restructuring school discipline. Chapel Hill, NC: New View Publications.

Hill, D. (1990). Order in the classroom. Teacher, (April) 70-77.

Jones, V. & Jones, L. (1997). Comprehensive classroom management. Boston, MA: Allyn & Bacon.

Kohn, A. (1996). Beyond discipline: From compliance to community. Alexandria, VA: Association for Supervision and Curriculum Development.

Landau, B.M. & Gathercoal, P. (2000). Creating peaceful classrooms: Judicious discipline and the class meetings. Phi Delta Kappan, 81, 6, 450-454.

Lightfoot, S.L. (1983). The good high school. New York: Basic Books.

Lipsitz, (1984). Successful schools for young adolescents. New Brunswick, NJ: Transaction Books.

McCaslin, M. & Good, T. (1996). Listening in classrooms. New York: Harper Collins.

McEwan, B. (1990). Review of judicious discipline. Democracy and Education. 4(3), 37-40.

McEwan, B., Gathercoal, P. & Nimmo, V. (1999). Application of judicious discipline: A common language for classroom management. In Freiberg, H.J. (Ed.). Beyond behaviorism: Changing the classroom management paradigm. Boston: Allyn and Bacon.

Miles, M.B. & Huberman, A.M. (1994). Qualitative data analysis: an expanded source book (2nd ed.). Thousand Oaks, CA: Sage Publications.

National Council for the Social Studies. (1994). Standards in social studies. Washington, D.C.: National Council for the Social Studies.

Nelsen, J. (1996). Positive discipline (3rd ed.). New York: Ballantine Books.

Sarason, S. (1990). The predictable failure of educational reform. San Francisco: Jossey Bass Publishers.

Sizer, T.R. (1984). Horace's compromise: The dilemma of the American high school. Boston: Houghton Mifflin.

South Australian Department of Education (1980). Child development stages. Adelaide, Australia: Department of Education, Training, and Employment.

# APPENDIX A

**Directions: For each statement mark whether it is true or false for this class with this teacher.**

| | True | False |
|---|---|---|
| 1. This teacher nearly always tells us what to do. | ☐ | ☐ |
| 2. We have to do what the teacher says in this class. | ☐ | ☐ |
| 3. The whole class helped to make the class rules. | ☐ | ☐ |
| 4. I often decide for myself what I will do and where I will do it in this class. | ☐ | ☐ |
| 5. We are all very friendly together in this class. | ☐ | ☐ |
| 6. When students argue in this class people get upset. | ☐ | ☐ |
| 7. Nearly all of this class feels warm and friendly to this teacher. | ☐ | ☐ |
| 8. It's okay to disagree strongly with this teacher. | ☐ | ☐ |

**Directions: For each statement mark whether it is true or false for this class with this teacher.**

| | True | False |
|---|---|---|
| 1. This teacher nearly always tells us what to do. | ☐ | ☐ |
| 2. We have to do what the teacher says in this class. | ☐ | ☐ |
| 3. The whole class helped to make the class rules. | ☐ | ☐ |
| 4. I often decide for myself what I will do and where I will do it in this class. | ☐ | ☐ |
| 5. We are all very friendly together in this class. | ☐ | ☐ |
| 6. When students argue in this class people get upset. | ☐ | ☐ |
| 7. Nearly all of this class feels warm and friendly to this teacher. | ☐ | ☐ |
| 8. It's okay to disagree strongly with this teacher. | ☐ | ☐ |

## Guidelines for Administering the Questionnaire

1. Have someone other than the teacher administer the questionnaire to the students.

2. Paraphrase this introductory statement:

> Stress anonymity, the class is not being judged, the teacher is not being judged, the questionnaire applies to this class with this particular teacher, it is the students' own opinions which are important. Here is an example.
>
> "I want to find out what this class is like with M. ..[Teacher's Name]..... Don't put your names on the papers as I don't want to know what you think as individuals, rather I want to find out about the class as a whole. Put a mark in the box for either true or false for each of the 8 statements. You must put a mark in one or the other box to have it counted. Remember it is your opinion or view that is important so please don't look at anybody else's answers or discuss them until afterwards."

3. Consider, after the test, talking about the class and how students think it is going. This is potentially a powerful way of making the class aware of its own process. It is a good opportunity fore students to make personal statements about how the climate is progressing and invite them to comment on changes they would like to see in the class.

## Scoring the Questionnaire

1. There are 8 statements in four pairs. Each pair of statements give four possible results, e.g., the first pair is questions 1 and 2, and they deal with *power* in the classroom.

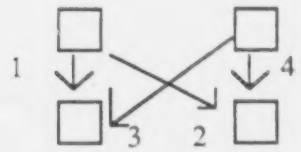
| | True | False | |
|---|---|---|---|
| If they marked as follows: Statement 1. | ☒ | ☐ | |
| Statement 2. | ☒ | ☐ | |
| this would be a stage 1 or S.1. response. | | | |
| The three other possible responses follow: | | | |
| Statement 1. | ☒ | ☐ | a S.2. response |
| Statement 2. | ☐ | ☒ | |
| Statement 1. | ☐ | ☒ | a S.3. response |
| Statement 2. | ☒ | ☐ | |

BEST COPY AVAILABLE

Statement 1. ☐ ☒ a S.4. response

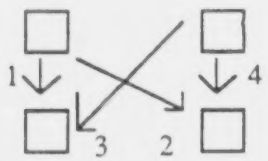
Statement 2. ☐ ☒

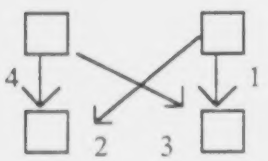
We can summarize these as follows.

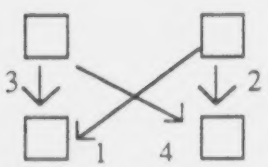


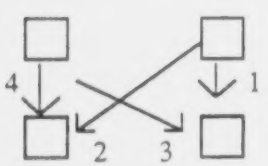

If you read the questions and look at the scoring system you will see how they fit into the stages of development model.

The overall scoring scheme is this

1.
2. 


3.
4. 


5.
6. 


7.
8. 

# APPENDIX B

## Analysis of Questionnaire

The first four statements deal with power and the last four statements deal with affect.

On each questionnaire write the stage numbers down by each pair of questions, e.g.,

| | True | False | |
|---|---|---|---|
| Statement 1. | ☒ | ☐ | 1 |
| Statement 2. | ☒ | ☐ | |
| Statement 3. | ☒ | ☐ | 3 |
| Statement 4. | ☐ | ☒ | |
| Statement 5. | ☐ | ☒ | 1 |
| Statement 6. | ☒ | ☐ | |
| Statement 7. | ☐ | ☒ | 1 |
| Statement 8. | ☐ | ☒ | |

Total the scores from the class under the four stages, e.g., Using the data from the above result:

| S.1. | S.2. | S.3. | S.4. |
|---|---|---|---|
| 3 | 0 | 1 | 0 |

The class result may look something like this:

| S.1. | S.2. | S.3. | S.4. |
|---|---|---|---|
| 27 | 14 | 9 | 10 |

This can be converted to a percentage by adding up the total number of responses, e.g.,

$27 + 14 + 9 + 10 = 60$

and dividing the stage totals by this number, e.g.,

$$\frac{27}{60} \quad \frac{14}{60} \quad \frac{9}{60} \quad \frac{10}{60}$$

and multiplying by $\frac{100}{1}$ to get a percentage

e.g.

| S.1. | S.2. | S.3. | S.4. |
|---|---|---|---|
| 45% | 23% | 15% | 17% |